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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,716	07/14/2003	Atsushi Suzuki	053588-5014	4192
9629	7590	10/19/2004	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			SHAH, MANISH S	
		ART UNIT	PAPER NUMBER	
		2853		

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/617,716	SUZUKI ET AL. 	
Examiner	Art Unit	2853	
Manish S. Shah			

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-17 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/1403.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Teraoka et al. (# US 6530656).

Teraoka et al. discloses an ink set for inkjet recording for forming a black image portion in a color image with a color ink and a black ink (see Examples), wherein the black ink includes at least a cationic self-dispersible carbon black and the color ink includes an anionic dye and an anionic substance (see Abstract), wherein the carbon black is contained in an amount of 0.5 to 15% by weight of the total ink (column: 6, line: 58-65). They also disclose that the black ink and the color ink contain a surfactant (column: 8, line: 19-22) in an amount of 0.01 to 10% by weight of the color ink and the black ink (column: 9, line: 5-25).

2. Claims 6-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Teraoka et al. (# US 6530656).

Teraoka et al. discloses a method for inkjet recording including recording color image accordance with recording signals by ejecting from an orifice a black ink and color ink (column: 10, line: 45-65; see Examples), wherein the black ink includes at least a cationic self-dispersible carbon black and the color ink includes an anionic dye and an anionic substance (see Abstract), wherein the carbon black is contained in an amount of 0.5 to 15% by weight of the total ink (column: 6, line: 58-65). They also disclose that the black ink and the color ink contain a surfactant (column: 8, line: 19-22) in an amount of 0.01 to 10% by weight of the color ink and the black ink (column: 9, line: 5-25). They also disclose that the order of ejecting the black ink and the color ink changes (column: 23, line: 15-40).

3. Claims 12-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Teraoka et al. (# US 6530656).

Teraoka et al. discloses an apparatus for inkjet recording for forming a color image including at least an ink cartridge for ejecting a black ink and another ink cartridge for ejecting a color ink (column: 12, line: 18-35; figure: 5, 8), wherein the black ink includes at least a cationic self-dispersible carbon black and the color ink includes an anionic dye and an anionic substance (see Abstract), wherein the carbon black is contained in an amount of 0.5 to 15% by weight of the total ink (column: 6, line: 58-65). They also disclose that the ejecting the black ink immediately after the color ink or the color ink immediately after the black ink, which basically same as 20 ms or less (column: 23, line: 20-40). They also disclose that the black ink and the color ink contain

a surfactant (column: 8, line: 19-22) in an amount of 0.01 to 10% by weight of the color ink and the black ink (column: 9, line: 5-25).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 5, 11 & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teraoka et al. (# US 6530656) in view of Fukushima et al. (# US 5151128).

Teraoka et al. discloses all the limitation of an ink set, a method of printing and an inkjet recording apparatus except that the black ink includes a compound represented by the formula R-O-X<sub>n</sub>H, wherein R is functional group having 4 to 8 carbon atoms selected from the group consisting of an alkyl group, an alkenyl group, an alkynyl group, a phenyl group, an alkylphenyl group, an alkenylphenyl group and a cycloalkyl group, X is an oxyethylene group or an oxypropylene group; and n is an integer from 1 to 4.

Fukushima et al. teaches that to prevent generation of ink runs and promote drying and penetration of an ink (column: 2, line: 65-68), ink composition includes a compound represented by the formula R<sub>1</sub>-X-O-R<sub>2</sub>, wherein R<sub>1</sub> & R<sub>2</sub> each is an hydrogen atom or an alkyl group, with the proviso that they cannot both be a hydrogen

atom, and X is a random polymer of ethylene oxide and polypropylene oxide (column: 2, line: 15-30; see Table: 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink composition of Teraoka et al. by the aforementioned teaching of Fukushima et al. in order to prevent generation of ink runs and promote drying and penetration of an ink, which gives high quality bleed free printed image.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(1) Takada et al. (# US 6454403) discloses an ink set for color inkjet recording including a black ink containing a self-dispersible carbon black having at least one cationic group, and color ink containing an anionic substance (see Abstract). They also disclose that ink contains surfactant (column: 11, line: 55-65).

(2) Takizawa et al. (# EP 0879857 A2) discloses an ink set for color inkjet recording including a black ink containing cationic a self-dispersible carbon black, and an anionic color ink (see Abstract; page: 4, line: 45-57). They also disclose that ink contains surfactant (page: 9, line: 55-58).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manish S. Shah whose telephone number is (571) 272-2152. The examiner can normally be reached on 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Manish S. Shah  
Examiner  
Art Unit 2853

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10/15/04